

Research into competency models in arts education

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A rough and pragmatic description of competence (or competency) would be:
a combination of knowledge, skills and attitudes appropriate to the context. Or, in other words: a disposition to act or perform successfully and responsibly in a certain domain.

Competencies are thought to be learnable (or teachable if you like) and have different levels or degrees from beginner to intermediate to advanced. The concept of competency overlaps with concepts such as 'expertise' and 'literacy' and it is related to concepts such as 'common reference levels' and 'educational standards'.

The concept of competencies stems from the world of human resource management and labour markets, and later found its way into education. First it came into use in professional or vocational education, but nowadays it is also used in many countries in the educational policies of primary and secondary education. But this is not the case everywhere, for instance in The Netherlands the concept of competency is used in vocational education, but hardly in primary and secondary education. I limit my presentation to formal education, although the concept of competence can also be applied in nonformal and informal education.

I gave a rough description of competency, but there are many definitions of competency and there are also differences between definitions and uses in different countries. Despite national differences there are also overarching transnational competency concepts, such as the

- EU eight key competences for lifelong learning, including *cultural awareness and expression*, which involves appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media (music, performing arts, literature and the visual arts);
- The Common European Framework of Reference for Languages; a guideline for the design of curricula, teaching and assessment of foreign language proficiency
- The OECD skills for innovation;
- The 21st century skills : the critical skills students need to be successful in the digital age and beyond;
- PISA, the Program for International Student Assessment, the international framework of classification and assessment of competencies in reading, mathematics and science.

Especially PISA (and it's sometimes disappointing outcomes) has led in several countries to the formulation of competency models and educational standards, not only in reading, mathematics and science but in other subjects as well. This also is the case for arts education subjects. That is not to say that by formulating competency models and standards

these arts subjects automatically earn the same status as reading and mathematics, but the other way around, when no competency models and standards can be formulated it would confirm a lower status of these subjects. So accepting competency models has certainly to do with containing your place in the educational system.

The acceptance of competency models has important consequences for curriculum development and assessment. The initial question in curriculum development is no longer: What will we teach and when should we teach it, but what will students be able to do when they learned the key content? In other words the curriculum should be mapped backwards from desired competencies. Rather than considering the curriculum a listing of content inputs, the curriculum should be framed and developed in terms of outputs. This requires curriculum embedded cornerstone tasks that are intended to engage students in exercising and applying their knowledge and skills in meaningful and relevant contexts. In German one speaks of 'Kompetenzorientierte Aufgaben'.

Competency based assessment means the formulation of worthy performance tasks that operationalize the desired competencies. And it calls for standards that scale the competency dimensions and mark achievement levels on certain moments in students career of schooling.

There is a vast amount of literature on competencies and there are also critiques of the concept. However we are gathered here to discuss international research, so I will present some research themes and research questions in this area. My view on this is shaped by my taking part in an international network of art education researchers called ENVIL: the European Network of Visual Literacy. Ernst Wagner, who is present here is one of the initiators.

Our ambitious goal is modelled after the Common European Framework of Reference for Languages, that is we strive for a common European framework of reference on visual literacy. We are not completely naive and we know it took more than two decades and the efforts of many researchers and educators to formulate the languages frame of Reference. So we have to be modest and aim for a prototype or a preliminary model of such a frame of reference for visual arts education.

Now I come to research themes in relation to competency models and educational standards: reviews of competency models; empirical foundations of competency models; studying the relative effectiveness of different kinds of pedagogies and assessment.

Reviews of competency models

We need descriptive research in the form of international reviews of existing competency models in order to analyze the communalities and differences and to use the outcomes for the design of new models. An example is the 'Report International arts education standards' written for the National Coalition for Core Standards in the USA

(<http://nccas.wikispaces.com/file/view/College%20Board%20International%20Standards%20Report.pdf>) It compares arts education Standards from 15 countries and in the report three main competency dimensions are distinguished: Responding/appreciating, Expressing/realizing und Generating/problem solving (conceptualizing, creative problem solving or idea generation).

The first step in ENVIL also was a survey of visual arts curricula and competency models in a sample of 10 European countries. We asked experts from these countries to fill in a questionnaire that was partly aimed at facts (like schooltype; ages of pupils; what competence dimensions are distinguished and what competence levels) but we also asked more open ended interpretive questions about policy contexts, pedagogical didactic foundations etc. The outcomes were used to come to a very first sketch of a common structural model

As an illustration let me show you some outcomes regarding to the question which competency dimensions are distinguished in the visual arts competency models or national curricula. The two main dimensions that you can find in all curricula are responding, (appreciating, sensing, spectating, apprehending) versus making (production, expressing, creating, realizing, constructing etc) (fig 1)

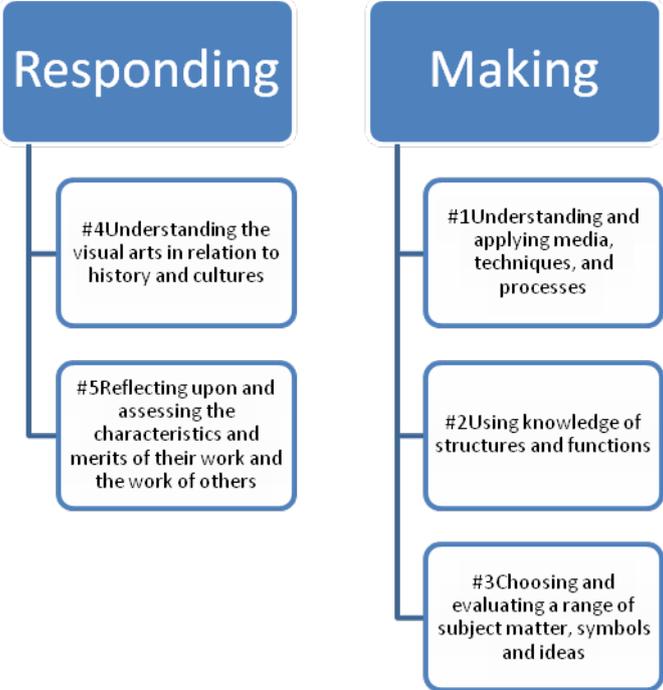


Fig 1

There are also models that use three main dimensions. Besides the two dimensions making and responding there is a third dimension that applies to both these dimensions. Examples of such a third dimension are reflection and creative thinking (fig 2).

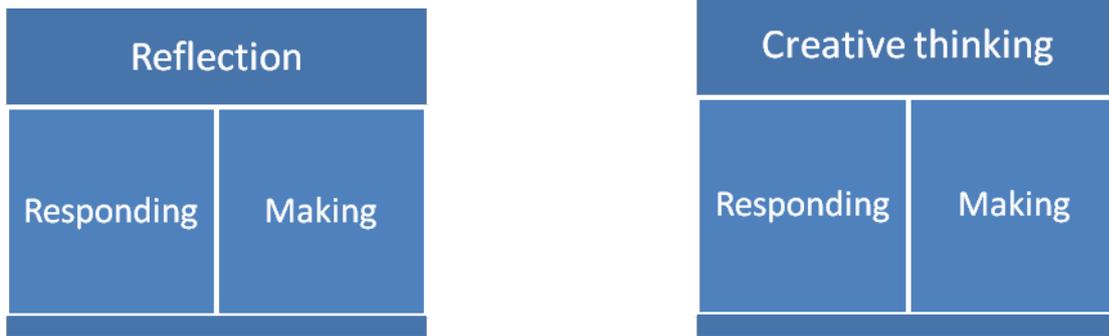
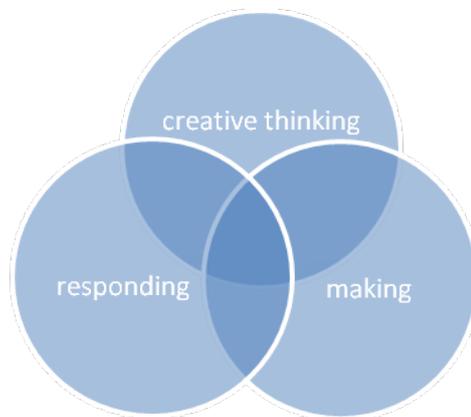


Fig 2
 In many models it is stressed that the dimensions are interrelated or overlap.
 In a Dutch model (fig 3) this is shown like this:



In the Australian curriculum model (that was not in our review but I use it because it illustrates my point) the interrelatedness of responding (sensory, cognitive, affective), realizing and generating is made visible in another way (fig 4).



Fig 4

Empirical foundations of competency models

An objection that can be raised against many competency models is that they are written in a largely data-free mode, that is they formulate what students should be able to do, but have little empirical groundings. Or rather they are largely based on a mixture of practical knowledge and experience and theoretical desirability's, but not on research findings.

So an obvious direction of research is to create empirical groundings for competency models, or for certain competency dimensions and domains. A good example is the RAVIKO project by Edith Glaser and colleagues that empirically studied visual spatial competencies (http://www.kunstunterricht-projekt.ch/pdfs/AbstractSchlussbericht_raviko.pdf). Pupils between 10 and 13 years old were followed in school during a year and they were given a series of drawing lessons and assignments. The results showed that few drawings could be assigned to pure developmental stages and many drawings are mixed forms of visual spatial representations. Pupils use different visual spatial strategies and seem to be able to choose between them.

Educational standards are by nature general and normative, whereas the study describes the often mixed stages of visual spatial representations and the idiosyncratic ways pupils can master visual problems. This tension indicates that studies like these definitely can help to underpin educational standards, but one cannot go directly from an empirical finding to an educational norm. Moreover the study shows that it is time consuming to get data on an important but limited competency and that only for a certain age group in a certain national context. This makes the desired empirical underpinning of comprehensive competency models in all arts disciplines quite labour intensive.

Relative effectiveness of different kinds of pedagogies

For some the what of the competences and standards has no relationship with the how of different ways of learning and teaching competences, so this would mean that these are completely separated fields of research. But I think one cannot separate the two and that there is a relationship between the what and the how. Competences stem from a social – constructivist view on learning and this demands for certain kinds of teaching strategies. So relevant research would be studying the relative effectiveness of different kinds of pedagogies in different arts forms on the acquisition of arts competences. And this of course points to another field of research, namely that of teacher competences.

Assessment

An obvious theme of research in relation to competencies and standards is assessment. Assessment of competencies requires what is called authentic assessment: assessment of the execution of a meaningful task that demands the combination of knowledge, skill and attitude required by a comparable challenge in professional arts practice. Authentic assessment of arts competencies faces the classical problems of validity, reliability, feasibility and fairness. This is especially difficult when focusing on complex skills such as arts criticism or creative skills. To what extent are the intended qualities measured? What types of evidence inform validity arguments? Are judgments consistent and unbiased? To what extent can teachers efficiently use certain assessment instruments (and the data

they generate) in the classroom? And in regard to the emphasis on reflection there is the question of the status of self assessment and peer assessment. Some instruments use a holistic assessment of artistic products or performances whereas others describe analytic assessment of both process (persistence, inventivity, capacity for self-assessment) and product criteria (formal quality, craftsmanship, visibility of intention) using rubrics. Often in arts education the question is raised whether analytic rubrics can assess it all, or if there are some outcomes that are 'unrubricable'. So even if there is already quite some research on assessment in the arts I think there still is a lot of research to be done in the assessment of arts competencies.

As we all now there is a lot of attention to the assessment of general, cross curricular competences, such as the key competencies, 21st century skills in relation to arts education. In many art competency models and national curricula it is stated that arts contribute to or foster social competences, personal competences, competences in other subject area's etc.

The OECD report 'Art for art' s sake? The impact of arts education' (<http://www.oecd.org/edu/ceri/arts.htm>) that was published this summer concludes that many transfer claims still cannot or not yet be substantiated. The authors argue for more rigorous and theory driven studies and experiments that examine the effects of arts on non arts competencies. On the other hand the authors insist (especially in the conclusion) on the importance of justifying arts education in its own terms and not instrumentally, So should we prioritize this kind of better research into transfer effects of arts education, that is enhanced learning in non-arts disciplines, while most of us agree that these cross curricular competences cannot and should not be its main justification?

I think that the different kinds of research into arts competences themselves are more needed when we want to improve the quality of arts education .